

Accepted Manuscript

Calcium isotope evidence for subduction-enriched lithospheric mantle under the northern North China Craton

Chunfei Chen, Yongsheng Liu, Lanping Feng, Stephen F. Foley, Lian Zhou, Mihai N. Ducea, Zhaochu Hu

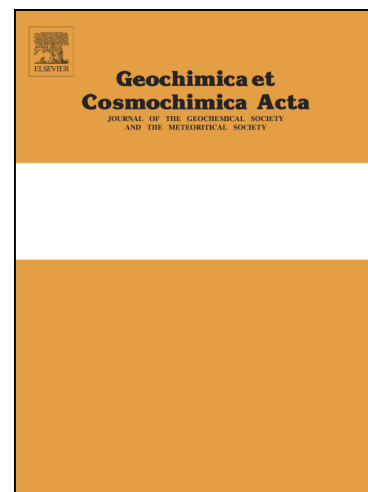
PII: S0016-7037(18)30372-7
DOI: <https://doi.org/10.1016/j.gca.2018.06.038>
Reference: GCA 10827

To appear in: *Geochimica et Cosmochimica Acta*

Received Date: 27 August 2017
Revised Date: 24 June 2018
Accepted Date: 30 June 2018

Please cite this article as: Chen, C., Liu, Y., Feng, L., Foley, S.F., Zhou, L., Ducea, M.N., Hu, Z., Calcium isotope evidence for subduction-enriched lithospheric mantle under the northern North China Craton, *Geochimica et Cosmochimica Acta* (2018), doi: <https://doi.org/10.1016/j.gca.2018.06.038>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Calcium isotope evidence for subduction-enriched lithospheric mantle under the northern North China Craton

Chunfei Chen^{a,b}, Yongsheng Liu^{a,*}, Lanping Feng^a, Stephen F. Foley^b, Lian Zhou^a,
Mihai N. Ducea^{c,d}, Zhaochu Hu^a

^a *State Key Laboratory of Geological Processes and Mineral Resources, School of Earth Sciences, China University of Geosciences, Wuhan 430074, China*

^b *ARC Centre of Excellence for Core to Crust Fluid Systems, Dept. of Earth and Planetary Sciences, Macquarie University, North Ryde, New South Wales 2109, Australia*

^c *Department of Geosciences, University of Arizona, Tucson, AZ 85721, USA*

^d *Faculty of Geology and Geophysics, University of Bucharest, Bucharest, Romania*

*Corresponding author

Yongsheng Liu; E-mail: yshliu@cug.edu.cn or yshliu@hotmail.com; Tel: 86-27-87483044; Fax: 86-27-67885096

Abstract:

The stable isotopes of calcium have tremendous potential for constraining the evolution of the mantle as well as fingerprinting the recycling of carbon in the mantle via subduction. In order to better identify possible contributions of subducted carbonate-bearing materials to upper mantle heterogeneity, we present Ca isotope data for peridotite xenoliths from Fanshi, northern North China Craton. These peridotites have previously been studied for major and trace element, Sr-Nd isotopic compositions. Two metasomatic events in the lithosphere mantle caused by subduction of carbonated sediments from the Pale-Asian oceanic slab, were previously identified: the first by carbonatite melt and the second by carbonate-rich

Download English Version:

<https://daneshyari.com/en/article/8910590>

Download Persian Version:

<https://daneshyari.com/article/8910590>

[Daneshyari.com](https://daneshyari.com)